CLAIMS

1 A complex comprising an HLA class I molecule or fragment thereof, which HLA class I molecule or fragment thereof comprises a T cell binding portion, and attaching means for selectively attaching said HLA class I molecule or fragment thereof to a target cell.

2 A complex as claimed in claim 1, wherein said attaching means comprises a linking polypeptide with high specific affinity for a target cell specific molecule on the surface of the target cell.

3 A complex as claimed in claim 2, wherein said linking polypeptide comprises an antibody, preferably a monoclonal antibody, raised against said target cell specific molecule.

4 A complex as claimed in claim 2 ~~or claim 3~~, wherein said linking polypeptide is adapted to be attached directly to said HLA class I molecule or fragment thereof.

5 A complex as claimed in claim 2 ~~or claim 3~~, wherein said attaching means further comprises a coupling system for coupling said linking polypeptide to said

HLA class I molecule or fragment thereof.

6 A complex as claimed in claim 5, wherein said coupling system comprises a two- or three-step chain of well-characterised paired small molecules, which chain is joined to the linking polypeptide and the HLA class I molecule so as to form a stable bridge between the two.

7 A complex as claimed in claim 6, characterised in that said chain comprises biotin and avidin/streptavidin.

8 A complex as claimed in claim 6, characterised in that said chain comprises calmodulin and calmodulin binding peptide.

A 9 A complex as claimed in ~~any preceding claim~~ Claim 1, which complex comprises a recombinant protein, which recombinant protein includes a moiety comprising said HLA class I molecule or fragment thereof, and a moiety comprising said attaching means.

10 A complex as claimed in ~~any preceding claim~~ Claim 1, characterised in that said HLA class I molecule or fragment thereof binds or is attached to a recognition peptide, which recognition peptide is arranged to be presented by said HLA class

I molecule or fragment thereof for T cell recognition.

11 A complex as claimed in ~~any preceding claim~~, characterised in that said target cell is a type of cell the presence of which is undesirable in a patient, such as a tumour cell or a diseased, foreign or malignant cell such as a cancer cell, a leukaemia cell, a cell infected with the HIV virus or with any other parasite, bacterium, microbe or virus, or a cell responsible for detrimental activity in auto-immune disease.

12 A complex as claimed in claim 11 ~~appended to claim 10~~, wherein ~~said~~ recognition peptide comprises a peptide which has a strong cytotoxic T cell response or which is capable of inducing a powerful immune response.

13 A complex as claimed in claim 11 appended ~~to claim 10, or claim 12~~, ~~wherein said~~ recognition peptide comprises a viral or microbial peptide, such as an influenza virus peptide, a measles virus peptide, an Epstein-Barr virus peptide, in particular an Epstein-Barr virus peptide comprising the RAKFFQLL epitope of the lytic protein BZLF1, a Cytomegalovirus peptide, or a tetanus toxoid peptide.

14 A complex as claimed in ~~any of claims 11-13~~, wherein the allotype of said

HLA class I molecule or fragment thereof is different from the allotype of the HLA class I molecules of the patient, so that an alloreactive response can additionally or alternatively be triggered against said target cell.

15 A complex as claimed in ~~any of claims 1-10~~, wherein said target cell is an antigen presenting cell.

16 A complex as claimed in claim 15 ~~appended to claim 10, wherein said~~ recognition peptide comprises a tumour specific peptide, or a viral peptide, or a bacterial peptide, or a parasitic peptide, or any peptide which is exclusively or characteristically presented by HLA class I molecules on the surface of diseased or malignant cells, or virally, bacterially, parasitically or microbially infected cells, or foreign cells the presence of which is undesirable in a patient.

17 A complex as claimed in ~~any preceding claim~~, wherein said target cell is a culture cell.

18 A complex as claimed in ~~any of claims 1-16~~, wherein said target cell is a cell in the body of a patient.

19 A method for attaching the complex of ~~any of claims 1-18~~ to said target cell, comprising the step of introducing to said target cell said HLA class I

molecule or fragment thereof and said attaching means.

20 Use of the complex of claim 15 ~~or claim 18~~ in the in vivo or ex vivo amplification of cytotoxic T cells with specificity for said recognition peptide.

21 A method for producing or enhancing an immunological response against a target cell, comprising the step of attaching the complex of ~~any of claims 1-18~~ claim 1 to said target cell ~~in accordance with the method of claim 15~~ by introducing.

22 A method for immunising a patient against a disease or condition which is characterised by the presence in the patient's body of cells displaying said recognition peptide on the surface thereof; such as a tumour, or a malignant or auto-immune disease such as cancer or leukaemia, an infectious disease such as a viral infection such as HIV infection, a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria; comprising the step of administering to said patient an effective amount of the complex of claim 15 ~~or claim 16.~~

23 A pharmaceutical composition for use in immunising a patient against a disease or condition which is characterised by the presence in the body of the patient of diseased, malignant or foreign cells; such as a tumour, or a malignant

or auto-immune disease such as cancer or leukaemia, or an infectious disease such as a viral infection such as HIV infection, or a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria; said pharmaceutical composition comprising a complex as claimed in claim 15 or claim 16 and an appropriate excipient or carrier.

24 Use of the complex of claim 15 ~~or claim 16~~ in the preparation of a medicament for use in immunising a patient against a disease or condition which is characterised by the presence in the patient's body of cells displaying said recognition peptide on the surface thereof; such as a tumour, or a malignant or auto-immune disease such as cancer or leukaemia, an infectious disease such as a viral infection such as HIV infection, a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria.

25 A method for the treatment of a disease or condition such as a tumour, or a malignant or auto-immune disease such as cancer or leukaemia, an infectious disease such as a viral infection such as HIV infection, a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria, comprising the step of administering to a patient in need thereof an effective amount of the complex of ~~any of claims 11-14.~~ Claim 11

26 A pharmaceutical composition for use in the treatment of a disease or condition characterised by the presence in a patient of diseased, foreign or malignant cells; such as a tumour, or a malignant or auto-immune disease such as cancer or leukaemia, or an infectious disease such as a viral infection such as HIV infection, or a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria; said pharmaceutical composition comprising a complex as claimed in ~~any of claims 11-14~~ claim 11 and an appropriate excipient or carrier.

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27 Use of the complex of ~~any of claims 11-14~~ claim 11 in the preparation of a medicament for the treatment of a tumour, or a malignant or auto-immune disease such as cancer or leukaemia, or an infectious disease such as a viral infection such as HIV infection, or a bacterial or microbial infection such as tuberculosis, or a parasitic infection such as malaria.

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28 A pharmaceutical pack or kit comprising one or more containers containing one or more of the pharmaceutical compositions claimed in claim 23 ~~or claim 26~~ and written instructions for the administration of said composition or compositions to a patient.

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